On the Horizon

DoD continues to encounter new issues and challenges in the Environmental Restoration Program. In response, DoD must issue policies and guidance, create criteria for prioritizing activities, reallocate resources, and develop management and oversight systems within the framework of the restoration program. This section discusses several challenges that DoD is facing and will continue to face over the next few years.

Unexploded Ordnance

Management of abandoned munitions and contaminated ranges is a major challenge for DoD. Unexploded ordnance (UXO) on closed, transferred, and transferring ranges poses a risk to public safety, health, and the environment. DoD is committed to taking appropriate cleanup, mitigation, and containment measures to adequately control these risks in a manner that is protective of human safety and the environment.

In FY98, as an early step in determining the most urgent UXO requirements, DoD began collecting data to identify the scope of the necessary UXO cleanup. DoD estimates that the range inventory will begin in late FY00, after the UXO data gathering process has been established.

Currently, only the FUDS program budgets for UXO requirements as an environmental restoration requirement. Component operations and maintenance accounts presently include the costs and other information associated with cleanup efforts at closed ranges on active installations. At BRAC installations, the Components have included UXO requirements in their environmental compliance budgets. In response to the recent Munitions Rule issued by EPA, which addresses UXO at active and inactive ranges, DoD plans to modify existing DERP policy to allow the Components to program and budget for UXO cleanup in the appropriate Environmental Restoration accounts. DoD proposed the Range Rule in September 1997 to establish a response and cleanup process for UXO at closed, transferred, and transferring military ranges. As DoD incorporates these recent policy changes, the Components will begin programming and budgeting for UXO cleanup at closed, transferring, and transferred ranges. Beginning in FY01, the Components will budget for UXO cleanup at closed, transferring, or transferred ranges in addition to their Environmental Restoration and BRAC requirements. These requirements will not include UXO cleanup at active ranges or at inactive ranges on active installations.

Munitions Rule: 62 *FR* 6621-6657; February 12, 1997
Proposed Range Rule: 62 *FR* 50795-50843; September 26, 1997
http://www.access.gpo.gov/su_docs/aces/aces140.html (Federal Register Query Page)

One of the most difficult aspects of the UXO issue is the lack of proven UXO clearance technologies. DoD is extensively involved in efforts to develop, demonstrate, and transfer new technologies for UXO detection and clearance to expand the selection of UXO cleanup options. ESTCP, SERDP, and the congressionally mandated Advanced Technology Demonstrations at Jefferson Proving Ground demonstrated several UXO detection and characterization technologies in FY98. One of the projects, the Multi-Sensor Towed Array Detection System (MTADS), demonstrated that detection systems could routinely achieve UXO detection probabilities of greater than 95 percent. The biggest drawbacks of this and similar systems are a high rate of false alarms and a less than desirable ability to discriminate between UXO and nonhazardous clutter that does not pose any safety risk. Additional planned demonstrations will focus on better identification methods and discrimination of buried UXO under a wide range of ambient conditions. This research will continue into FY99.

An environmental remediation project at a post-World War II disposal site at Naval Air Station Adak involved the recovery and destruction of approximately 2,000 bombs (44 of which were leaking napalm).

The Defense Science Board estimates that there are an insufficient number of available, qualified UXO technicians to complete the required UXO remediation efforts. The board also concluded that the training conducted at the Naval School Explosive Ordnance Disposal was not structured to meet the full scope of UXO technician training requirements. The board recommended that DoD encourage and support the development of a private / public-based, non-DoD training capacity. To remedy the anticipated shortfall in trained UXO technicians, DoD instituted two projects:

- DoD established an Integrated Process Team (IPT), composed of Component, Corps of Engineers, and industry representatives, to define the core competencies required of all UXO technicians. The IPT issued a final draft report that establishes the skill sets required by UXO technicians at all levels.

- DoD is working in cooperation with industry to establish a baseline training curriculum for entry-level UXO technicians. The Texas Engineering Extension Service, at College Station, Texas, developed a training course for entry-level UXO technicians. DoD is currently evaluating and reviewing the course for certification.

DoD is also helping Native Americans address the UXO hazards on their lands. One such project currently under way is taking place at the Badlands Bombing Range. This project is part of a larger effort to assist Native Americans in dealing with environmental impacts on their lands. A selected group of Native Americans has received UXO training

and will enter an apprentice program with a UXO remediation company. The short-term objective is to empower the tribes with the internal capacity to remediate environmental impacts on their own lands. An additional, long-term benefit is empowering the tribes to develop the skills necessary to start a business capable of competing in the general marketplace.

Future of BRAC

The BRAC program will face new challenges resulting from the expiration of the BRAC account in July 2001 and potential new BRAC rounds. The Components have programmed funding to complete environmental restoration activities at BRAC installations after FY01, but the legal authority to spend environmental restoration funds at BRAC installations will expire with the BRAC account. DoD estimates that it will need approximately $1.9 billion to complete the remaining environmental restoration activities after FY01 so that property is suitable for transfer to local communities and economic revitalization can continue. DoD is considering several approaches, described below, to ensure that it meets all cleanup commitments at BRAC installations. This is the right thing to do for communities and others impacted by base closures and realignments.

- DoD submitted a legislative proposal to Congress that would establish a post-FY01 BRAC Environmental Account to provide a continuing funding source for cleanup of the existing BRAC installations. Establishing a new BRAC account is not expected to have an adverse budgetary impact, since the post-FY01 funding is currently planned and programmed in other accounts, and can be rolled over into this new account, along with any outstanding balances in the existing BRAC account. The proposed BRAC account will ensure that environmental restoration activities at existing BRAC installations will be completed.

- Congress will also consider a proposal to authorize additional rounds of base closures and realignments in 2001 and 2003 in an amendment to the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510; 10 U.S.C. 2687). This legislation, if passed, will initiate a new set of installation closures and extend the BRAC account.

Site Closeout

For many years, management guidance for the environmental program focused on completing the studies and analysis necessary for making an informed decision about selecting and implementing environmental remedies. After more than a decade of DERP activities, however, the focus of the program is evolving, as many installations bring their cleanup efforts near to completion. Now that these installations have implemented selected remedies and are in the remedial action operation phase of their cleanups, the next important step is to consider the requirements for completing and documenting the closeout of sites once cleanup goals are met and other environmental responsibilities are fulfilled. Site closeout occurs when the community and the regulators

accept the achievement of the final remedy as ensuring their sustained health and environmental protection.

The site closeout process is still uncharted territory for those involved in cleanup, including the military community. Information on many key issues in the process is relatively limited. Strategies and guidance addressing these issues will evolve as more installations encounter the issues and gain experience in managing them. Some prominent topics include—

- Land use controls
- Optimization of remedial action operations
- Effective accomplishment of long-term monitoring
- Records management
- Natural resource injury assessment.

The Air Force Base Conversion Agency convened a working group to address site closeout issues, with representatives from the Military Departments, OSD, and EPA, in September 1997. The working group identified requirements for closeout of environmental restoration sites at military facilities, including active and closing bases, and developed a guide for meeting the requirements. This guide, *The Environmental Site Closeout Process*, consolidates the existing statutory and regulatory requirements affecting the closeout of sites under the DERP. DoD released the guide as an interim document in January 1999.

WorldWideWeb

The Environmental Site Closeout Process
http://www.afbca.hq.af.mil/closeout

Voluntary Cleanup Agreements

As described earlier in the report, the Pennsylvania multisite voluntary cleanup agreement establishes a model for voluntary cleanup agreements with other states. New Jersey and DoD are currently exploring the possibility of entering a similar arrangement. In addition, DoD plans to develop model multisite voluntary cleanup agreement language for use with other states and is working to identify at least three additional states as candidates for the next voluntary agreements. Our goal is to sign agreements with at least four states by 2001. In addition, DoD plans to work with EPA so that all types of sites (e.g., BRAC sites and sites on the National Priorities List, which are currently exempt from the Pennsylvania agreement) are included under these agreements. Finally, integration of voluntary agreements with the DSMOA is a fundamental objective.

Regulator Partnering

One of DoD's main priorities for 1999 is expanding and improving the quality of its partnering activities. Partnering fosters teamwork and promotes innovation, strengthening trust through mutual investment and reducing the cost and time (compared with an adversarial approach). DoD's partnerships with environmental regulatory agencies are essential to ensuring the success of environmental restoration activities.

DoD plans to work closely with regulators, especially EPA, to resolve any issues that delay cleanups. For example, DoD and EPA are working together through regulatory negotiation to develop a framework for addressing UXO. Regulatory negotiation brings together stakeholders to reach consensus before issuing a proposed rule. This process can be time consuming, but ultimately can *save* time and money by avoiding disagreements, litigation, and potential rewrites after finalization of the rule.

In addition to the issue of UXO at active and closing installations, UXO at former military ranges on FUDS properties could be a particularly serious problem. DoD transferred many of the more than 9,000 FUDS properties to private owners before the implementation of extensive investigation and site characterization requirements, leading to uncertainty about the extent of the problem on these properties. As with UXO at active and closing installations, partnering with regulatory agencies is essential to this program's success. DoD is working closely with EPA nationwide to agree on the best strategy and plan to address the UXO issue and develop a unified regulatory framework for both active and BRAC installations, as well as FUDS properties.

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Even as we confidently present our progress toward site closeout in a maturing environmental restoration program, significant challenges are unfolding on the horizon. Increasing awareness of the thorny issues UXO cleanup poses reminds us that we are still learning about the environmental ramifications of past practices. Funding to complete current activities and meet future needs will remain a concern. As these issues evolve, DoD will continue to take responsibility for remedying past actions and practicing sound future planning.

DoD intends to demonstrate this resolve in its relationships with stakeholders and through its programmatic activities, such as—

- Continuing to seek innovative technologies
- Building voluntary cleanup agreements tailored to states' needs
- Enhancing working relationships with EPA and other government entities.